

## SEQUENCE LISTING PART

&lt;110&gt; THE UNIVERSITY OF SYDNEY

&lt;120&gt; ANTIGENS AND THEIR DETECTION

&lt;130&gt; REEVES

&lt;140&gt;

&lt;141&gt;

&lt;160&gt; 68

&lt;170&gt; PatentIn Ver. 2.0

&lt;210&gt; 1

&lt;211&gt; 1773

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 1

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<213> Escherichia coli

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&lt;211&gt; 417

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 5

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&lt;210&gt; 6

&lt;211&gt; 950

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 6

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&lt;210&gt; 7

&lt;211&gt; 1212

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 7

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&lt;211&gt; 1647

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 8

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&lt;211&gt; 1758

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 9

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&lt;211&gt; 1383

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

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&lt;210&gt; 11

&lt;211&gt; 2013

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 11

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&lt;210&gt; 12

&lt;211&gt; 1263

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 12

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&lt;210&gt; 13

&lt;211&gt; 1368

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 13

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cgtctggaag aaattgaccg tgtatctgag caaactcagt ttaacggcgt gaaagtcctt 360  
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cagaaagcaa ctggcagtgta cctgatttct aaatttaaag cgacaggtag tgataactat 540  
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&lt;210&gt; 14

&lt;211&gt; 1788

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 14

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gatggtgaca ctgttactat caaagcagat gctgctcaaa ctgccacggt ttatacatat 720



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&lt;210&gt; 15

&lt;211&gt; 1653

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 15

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gcgaaggatg acgccgcagg tcaggcgatt gctaaccggt ttacttctaa cattaaggc 180
ctgactcagg ctgcacgtaa cgccaacgac ggtatttccg ttgcgcagac cactgaaggt 240
gcgctgtccg aaatcaacaa caacttacag cgtattcgtg agctgacggt tcaggcttct 300
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aagaaaattg actcagatac gctggggctg agtgggttta atgtgaatgg tggcggggct 540
gttgctaaca ctgctgcac taaagctgac ttggtagctg ctaatgcaac tgtggttagc 600
aacaatatata ctgtgagtg cgggttacgat gctgctaaag cgtctgattt gctggctgga 660
gttagtgatg gtgatactgt tcaggcaacc attaataacg gcttcggaac ggcgctagt 720
gcaacgaatt acaagtatga cagtgaagt aagtcttact cttttgatac cacaacggct 780
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tcgaaagcgc agatcatcca gcaggccggt aactccgtgc tggcaaaagc taaccaggta 1620
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&lt;210&gt; 16

&lt;211&gt; 1689

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 16

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gcgaaggatg acgcgcgagg tcaggcgatt gctaaccgtt ttacttctaa cattaaggc 180
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cagggctaa
                                                    1689

```

&lt;210&gt; 17

&lt;211&gt; 915

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 17

```

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915

&lt;210&gt; 18

&lt;211&gt; 1665

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 18

```

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<210> 19

<211> 1842

<212> DNA

<213> Escherichia coli

<400> 19

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<210> 20

<211> 1731

<212> DNA

<213> Escherichia coli

<400> 20

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&lt;210&gt; 21

&lt;211&gt; 1380

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 21

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 gaagggtgcg tgaaatgaaat taacaacaac ctgcagcgta ttctgtgaact ttctgttcag 240  
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accgtaaaca acctgtcttc tgcccgtagc cgtatcgaag atgctgacta cgcgaccgaa 1320  
gtgtctaaca tgtctcgtgc gcagatcctg caacaagcgg gtacctctgt tctggcacag 1380

&lt;210&gt; 22

&lt;211&gt; 1767

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 22

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aaccagtctg cgctgtcgag ttctatcgag cgtctgtctt ctggcttgcg tattaacagc 120  
gcgaaggatg acgcagcggg tcaggcgatt gctaaccgtt ttacttctaa cattaaggc 180  
ctgactcagg cggcacgtaa cgccaacgac ggtatctctc tggcgagac caccgaagg 240  
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accggtacta actccgactc cgacctggct tctattcagg acgaaatcaa atcccgtctg 360  
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ggtgcctatg atataaaaac cactaacaca gcgctgacta caactgatgc ctccgcgaaa 660  
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gctgctacag gtgggtttac gacggatgtc tccatctccg gggatcctac cgctgctgac 780  
gctactgcta ataaaactgc ccgtgatgca cttgcggcgt ctttacatgc tgagccgggt 840  
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gcgcagatta tccagcaggc cggtaaactc gtgctggcaa aagccaacca ggtaccgcag 1740  
caggttctgt ctctgctaca ggggttaa 1767

- 15 -

&lt;210&gt; 23

&lt;211&gt; 1383

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 23

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gcgacgaccg ggactaactc tgattctgac ctgtcttcta tccaggatga aatcaaatcc 300
cgtttaagcg aaattgaccg tgtatctggt cagactcagt ttaacggcgt gaacgtactg 360
gctaagaatg acacctgtc tattcaggta ggtgcaaata acggtcagac tatcaatatt 420
gacctgcagc aaatcgattc tcatcacatg ggtctggatg gtttcagcgt taaaaataat 480
gatgcagtg aaccagtgct tgcctggaat actcttgggg ggggggcagg ttctgttgct 540
gtcgacttcg caacaaccag tttgactgct atcaactggc tcggtagcgg tgctatcagc 600
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actgctgatg gttactatgc gtgcgatac gacaaggcta ccgggtgaggt cgctctgaaa 720
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aaa

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&lt;210&gt; 24

&lt;211&gt; 1197

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 24

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gacgctgcgg gccaaagcat tgctaaccgc ttcacttcta acatcaaagg tctgactcag 120
gccgcacgta acgccaacga cgggtattct ctggcgagca ccaactgaagg cgactgtct 180
gaaatcaaca acaacttgca gcggtgtcgt gaactgaccg ttcaggccac tacgggtact 240
aactctgatt ctgacctgtc ttcaatacag gacgaaatca aatcccgctc cgatgaaatt 300
gaccgcgtat ccggtcagac tcagttcaac ggcgttaatg ttctttccaa agatggttca 360
atgaaaattc aggttggtgc gaatgatggt caaactatct ccatcgatct gaagaaaatt 420
gattcttcaa ctttggggct gaatggcttc tcagtttcta aaaactctct taatgtcagc 480
aatgctatca catctatccc gcaagccgct agcaatgaac ctggtgatgt taacttcggg 540
gatactgatg agtctgcagc aatcgacgcc aaattggggg tttccgatac gtcaagcctg 600

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gccgactatg cgaccgaagt gtccaacatg tcgaaagcgc agatcatcca gcaggca 1197

&lt;210&gt; 25

&lt;211&gt; 1674

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 25

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gcgaaggatg acgccgcagg tcaggcgatt gctaaccgtt ttacttctaa cattaaggc 180  
ctgactcagg ctgcacgtaa cgccaacgac ggtatttctg ttgcacagac cactgaaggc 240  
gcgctgtccg aaatcaacaa caacttacag cgtattcgtg aactgacggt tcaggccact 300  
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gacaaattcc gtcctccct cgggtgcggt caaaaccgtc tggattccgc cgtcaccaac 1500  
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gcgaccgaag tgtccaacat gtcgaaagcg cagatcattc agcaggccgg taactccgtg 1620  
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&lt;210&gt; 26

&lt;211&gt; 1365



&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 26

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aacaaatctc agtcttctct tagctctgct attgagcgtc tctcttctgg cctgcgtatt 60
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&lt;210&gt; 27

&lt;211&gt; 1740

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 27

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atggcacaaag tcattaatac caacagcctc tcgctgatca ctcaaaataa tatcaacaag 60
aaccagtctg cgctgtcgag ttctatcgag cgtctgtctt ctggcttgcg tattaacagc 120
gcgaaggatg acgccgcagg tcaggcgatt gctaaccgtt ttacttctaa cattaaaggc 180
ctgactcagg ctgcacgtaa cgccaacgat ggtatttctg ttgcacagac cactgaaggc 240
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accgggacta actccgattc ggatctggac tccattcagg acgaaatcaa atcccgtctg 360
gacgaaattg accgcgtatc tggccagacc cagttcaacg gcgtgaacgt actggcgaaa 420
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gactatgcga ccgaagtgtc caatatgtcg aaagcgcaga tcatccagca ggccggtaac 1680  
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&lt;210&gt; 28

&lt;211&gt; 1233

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 28

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aaaggctctga ctcaggccgc acgtaacgcc aacgacggta tctctctggc gcagaccact 180  
gaaggcgcac tgtctgaaat caacaacaac ttgcagcgtg ttcgtgagct gaccgttcag 240  
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acataatacg acgcagcaaa tgggtgttacg aatgccaccc agattggtag tctggttcag 780  
gttggtgctg atgcaaacia tgatgcagtt ggttttgtta ccgtgcaggg gaaaaactat 840  
gttgctaatt actcattagt caatgcta atggcgctgctg gcgctgcagc aactagagtt 900  
acaattgatg gtgatggtag cttggagct aaccaggcta aaattgaact tagccaaaat 960  
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cgtctgagct ccgctgtaac caacctgaac aacaccacta ccaacctgtc tgaagcgcag 1140  
tcccgatttc aggacgccga ctatgcgacc gaagtgtcca acatgtcgaa agcgcagatc 1200  
atccagcagg caggtaactc cgtgctgtcc aaa 1233

&lt;210&gt; 29

&lt;211&gt; 1713

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

- 19 -

&lt;400&gt; 29

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atggcacaag tcattaatac caacagcctc tcgctgatca ctcaaaataa tatcaacaag 60
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gcgaaggatg acgccgcagg tcaggcgatt gctaaccgtt ttacttctaa cattaagggc 180
ctgactcagg ctgcacgtaa cgccaacgac ggtatttctg ttgcacagac cactgaaggc 240
gcgctgtccg aaatcaacaa caacttacag cgtattcgtg aactgacggt tcaggcgacg 300
accggaacta actccacctc tgacctggac tccattcagg acgaaatcaa atcccgctct 360
gatgaaattg accgcgtatc cggccaaacc cagttcaacg gcgtgaacgt actgtcaaaa 420
gatggctcga tgaaaattca ggtcggcgca aatgatggtg aaaccatcac gattgatctg 480
aaaaagatcg actcttctac attgaagctg accagcttca atgttaacgg taaaggcgct 540
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gctaccgacg tgctggcaag cgttagcggc ggcagcacta ttagcggtta taccggtaca 720
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tattcatttg acgcaaccgc acttaccaat ggcgatggta ctggggccac cactaaagtt 840
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ctgtctgaag cgcagtcctg cattcaggac gccgactatg cgaccgaagt gtccaatatg 1620
tcgaaagcgc agatcatcca gcaggccggt aactccgtgc tggcaaaagc caaccaggta 1680
ccgcagcagg ttctgtctct gctgcagggt taa 1713

```

&lt;210&gt; 30

&lt;211&gt; 1668

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 30

```

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aaccagtctg cgctgtcgag ttctatcgag cgtctgtctt ctggcttgcg tattaacagc 120
gctaaggatg acgccgcggg tcaggcgatt gctaaccgtt ttacttctaa cattaagggc 180
ctgactcagg ctgcacgtaa cgccaacgac ggtatttctg ttgcgcagac cactgaaggc 240
gcgctgtccg aaatcaacaa caacttacag cgtatccgtg aactgacggt tcaggcttct 300
accgggacta actccgattc ggatctggac tccattcagg acgaaatcaa atcccgctct 360
gacgaaattg accgcgtatc tggccagacc cagttcaacg gcgtgaacgt actggcgaaa 420
gacggttcaa tgaaaattca ggttggtgcg aatgacggcc agactatcac tattgatctg 480
aagaaaattg actcagatac gctggggctg agtgggttta atgtgaatgg tggcggggct 540
gttgctaata ctgcagcgac taaagatgat ttggtcgctg catcagtttc agctgcggta 600

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ggtaatgaat acactgtctc tgctggcctg tcgaaatcaa ctgctgctga tgttattgct 660  
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gcaactggag atgcttataa attcaatcaa gcaaacaaca cttttactta caataccacc 780  
tcaacagcgg cagaactcca atcttacctc acgcctaagg cgggggatac cgcaactttc 840  
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gactttggaa caacaaaaac tgctggggct attaatgtca caggagcagt gatcagtgtc 1140  
gatgcacttc tttccgccag taaagcgact gggtttactt ctggcactta taccgtaggt 1200  
acagatggag ttgttaaatc tgggtggcaat gacgtttata acaaagctga cgggacggga 1260  
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tctggtaaag ctgtgtatgc tgatgcaaca ggaaaactaa ctactgacgc tgaaactaaa 1380  
gccgaaacca ccgccgatcc cctgaaagct ctggacgaag cgatcagctc catcgacaaa 1440  
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aacaccacta ccaacctgtc cgaagcgcag tcccgtattc aggacgccga ctatgcgacc 1560  
gaagtgtcca acatgtcgaa agcgcagatc atccagcagg ccggtaaactc cgtgctggca 1620  
aaagctaacc aggtaccgca gcaggttctg tctctgctgc aggggttaa 1668

&lt;210&gt; 31

&lt;211&gt; 1713

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 31

atggcacaag tcattaatac caacagcctc tcgctgatca ctcaaaataa tatcaacaag 60  
aaccagtctg cgctgtcgag ttctatcgag cgtctgtctt ctggcttgcg tattaacagc 120  
gcgaaggatg acgccgcggg tcaggcgatt gctaaccgtt ttacttctaa cattaaggc 180  
ctgactcagg ctgcacgtaa cgccaacgac ggtatttccg ttgcgagac caccgaaggc 240  
gcgctgtccg aatcaacaa caacttacag cgtatccgtg aactgacggt tcaggccact 300  
accggtacta actccgattc tgacctggac tocatccagg acgaaatcaa atctcgtctt 360  
gatgaaattg accgcgtatc tggtcagacc cagttcaatg gcgtgaatgt gttgtccaaa 420  
gacggttcaa tgaaaattca ggtgggcgca aatgatggtg aaaccatcac gattgacctg 480  
aaaaaaatcg actcttctac actgaagctg accagcttca acgtcaacgg taaaggcgct 540  
gttgataatg caaaagccac tgaagcagat ctgaccgctg cgggcttctc ccaaagtga 600  
gttgtcagtg gcaatagcac ctggactaaa tctactgtta ctacctttaa tgcagcaaca 660  
gctaccgatg tgctggctag cgttagtggc ggcagcacta ttagcgggta tgctggcaca 720  
aacaatgggt taggcgtagc ggcttctact gcatatacct acaacgcaac cagcaagtct 780  
tattcatttg acgcaaccgc acttactaat ggtgatggta ctgcgggctc aactaaagt 840  
gctgatgttc tgaaagccta tgcagcaaac ggcgataaca cggctcagat ctccatcggt 900  
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gcaacgttgg acggtatttt caacggtgcg aatgggtcatg atgcagttga tgcgaagatt 1080  
accttcggca gcggcatgac cgttgacttc acccagggtta gcaacaatgt ggatattaag 1140  
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ggagcgaccg taaatattgg tgctgagggg gaactgacga ctgcggccaa caagactgtc 1320  
acagaaaact atcacgaatt tgctaacggc aatattctgg atgatgacgg cgcggtctctg 1380

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tataaagcgg ctgacggctc tctgaccact gaagctacag gtaaattctga agcgaccacg 1440
gatccgctga aagcgctgga cgatgctatc gcatccgtag acaaattccg ttcttccctg 1500
ggtgccgtgc agaaccgtct ggattccgca gtcaccaacc tgaacaacac cactaccaac 1560
ctgtccgaag cgcagtcccc tattcaggac gccgactatg cgaccgaagt gtccaacatg 1620
tcgaaagcgc agattattca gcaggcaggt aactccgtgc tggcaaaagc taaccaggta 1680
ccgcagcagg ttctgtctct gctgcagggt taa                                     1713

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&lt;210&gt; 32

&lt;211&gt; 1188

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 32

```

aacaaaaacc agtctgcgct gtcgacttct atcgagcgcc tctcttctgg tctgcgcatt 60
aacagcgcta aagatgacgc tgcggggccag gcgattgcta accgcttcac ttctaacatc 120
aaagggtctga ctcaggccgc acgtaacgcc aacgacggta tctctctggc gcagaccact 180
gaaggcgcac tgtctgaaat caacaacaac ttgcagcgctg tgcgtgagtt gactgttcag 240
gcgacgaccg ggactaactc tgattctgac ctgtcttcta ttcaggacga aatcaaatcc 300
cgtctggatg aaattgaccg tgtttccggc cagaccaggt tcaacggcgt gaacgtgctg 360
gctaaaaacg gttctatggc gattcagggt ggcgcgaaat atgggcagac catcaacatc 420
gacctgcaga aaatcgactc ttctactctg ggccctggcg gcttctccgt atctaacaat 480
gcactgaaac tgagcgattc tatcactcag gttggtgcga gtggttcact ggcagatgtg 540
aaactgagct ctgttgctc ggctctgggt gtagacgcaa gcactctgac tctgcacaac 600
gtacagaccc cagctggcgc agcaacagct aactatgttg tctcttctgg ttctgacaac 660
tactcagtat ctgttgaaaga tagctccggc acagttacgc tgaacaccac tgatataggt 720
tataccgata ccgctaattg cgttactacc ggttccatga ctggtaagta cgttaaagtt 780
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gatccactgg ctctgctgga caaagctatc gcatctgttg ataaattccg ttcttctcta 1020
ggggcggtgc agaaccgtct gagctctgct gtaaccaacc tgaacaacac cactaccaac 1080
ctgtccgaag cgcagtcccc tattcaggac gccgactatg cgaccgaagt gtccaacatg 1140
tcgaaagcgc agatcatcca gcaggcgggt aactccgtgc tgtctaaa                                     1188

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&lt;210&gt; 33

&lt;211&gt; 1638

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 33

```

atggcacaag tcattaatac caacagcctc tcgctgatca ctcaaataa tatcaacaag 60
aaccagtctg cgctgtcgag ttctatcgag cgtctgtctt ctggcttgcg tattaacagc 120
gcgaaggatg acgccgcggg tcaggcgatt gtaaccggtt ttacttctaa cattaaaggc 180
ctgactcagg ctgcacgtaa cgccaatgac ggtatttctg ttgcacagac cactgaaggc 240
gcgctgtccg aaatcaacaa caacttacag cgtattcgtg aactgacggt tcaggcttct 300
accgggacta actctgattc ggatctggac tccattcagg acgaaatcaa atcccgctctc 360
gacgaaattg accgcgtatc cggtcagacc cagttcaacg gcgtgaacgt actggcaaaa 420
gacggttcga tgaaaattca ggttggtgcg aacgacggcc agactatcac tattgatctg 480

```

aagaaaattg actctgatac gctggggctg agtggggtta acgtaaatgg tagcgcagat 540  
aaggcaagtg tcgcggcgac agctgacgga atgggttaaag acggatatat caaaggggta 600  
acttcatctg acggcagcac tgcataact aaaactacag caaatactgc agcaaaagga 660  
tctgatattc ttgcggcgct taagactggc gataaaatta ccgcaacagg tgcaaatagc 720  
cttgctgata atgcgacatc gacaacttat acttataatg caaccagcaa taccttctcc 780  
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aaaacgacag ctgcatcagt tactattggg gggacagcac agaattgtaa tattgatgat 900  
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actaaaaacc aggcgggcaa cccgaaaaaa gcaaccgttt ctgggcttct cggaaatacg 1020  
gatgcgaaag gtactgctgt taaaacaacc atcaagacag aggctgggtg aacagttaca 1080  
gctgaaggta atacaggtag tgtaaaaatt gaaggtgcta ctgtttcagc atctgcattt 1140  
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gctgatgggtg tctacagcac agagaataaa acatcgaaga cgtccgatcc attggctgcg 1380  
cttgacgacg caatcagctc catcgacaaa ttccgttcat ccttgggtgc tatccagaac 1440  
cgtctggatt ccgcggtcac caacctgaac aacaccacta ccaacctgtc cgaagcgcag 1500  
tcccgtattc aggacgccga ctatgcgacc gaagtgtcca acatgtcgaa agcgcagatc 1560  
atccagcagg ccggtaactc cgtgctggca aaagctaacc aggtaccgca gcaggttctg 1620  
tctctgctgc agggctaa 1638

&lt;210&gt; 34

&lt;211&gt; 2145

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 34

aacaaatctc agtcttctct gagctccgcc attgaacgtc tctcttctgg cctgcgtatt 60  
aacagtgcta aagatgacgc agcagggtcag gcgattgcta accgttttac agcaaatatt 120  
aaagggtctga ctcaggcttc ccgtaacgcg aatgatggta tttctgttgc gcagaccact 180  
gaaggtgctg tgaatgaaat taacaacaac ctgcagcgtg tacgtgaact gactgttcag 240  
gcaactaacg gtactaactc tgacagcgat ctttcttcta tccaggctga aattactcaa 300  
cgtctggaag aaattgaccg tgtatctgag caaactcagt ttaacggcgt gaaagtcctt 360  
gctgaaaata atgaaatgaa aattcagggt ggtgctaatt atggtgaaac catcactatc 420  
aatctggcaa aaattgatgc gaaaactctc ggcctggacg gttttaatat cgatggcgcg 480  
cagaaagcaa ctggcagtg cctgatttct aaatttaaag cgacaggtag tgataactat 540  
gatgttggcg gtgatgctta tactgttaac gtagatagcg gagctgggta atgactccaa 600  
cttattgata gtgttttatg tttagataat gccgatgac tttgtcatgc agctccaccg 660  
attttgagaa cgacagcgac ttccgtccca gccgtgccag gtgctgcctc agattcagg 720  
tatgccgctc aattcgctgc gtatatcgct tgctgattac gtgcagcttt cccttcaggc 780  
gggattcata cagcggccag ccattccgtc tccatatcac caggtcaaag ggtgacagca 840  
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cataatgcgg gcagttgcc ggcatccaac gccattcatg gccatatcaa tgattttctg 1140  
gtgctgaccg ggttgagaag cggtgtaagt gaactgcagt tgccatgttt tacggcagtg 1200  
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agctgaacag gagggacagc tgatagaaac agaagccact ggagcacctc aaaaacacca 1320
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aatgatattt ttgttagtgc agcagatggt tcaactgaaa ctaaactctga cacaacata 1440
gctggtacag ggattgatgc tacagcactc gcagcagcgg ctaagaataa agcacagaat 1500
gataaattca cgtttaatgg agttgaattc acaacaacaa ctgcagcggg tggcaatggg 1560
aatggtgtat attctgcaga aattgatggt aagtcagtga catttactgt gacagatgct 1620
gacaaaaaag cttctttgat tacgagtggg acagtttaca aaaatagcgc tggcctttat 1680
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ggtggttagc cgattctggt aaacgaagat gcagcaaaat cgttgcaatc taccaccaac 1920
ccgctcgaaa ctatcgacaa agcattggct aaagttgaca atctgcggtc tgacctcggt 1980
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tcttctgccc gtagccgtat cgaagatgct gactacgcga ccgaagtgtc taacatgtct 2100
cgtgcgcaga tcctgcaaca agcgggtacc tctgttctgg cgcag 2145

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&lt;210&gt; 35

&lt;211&gt; 1587

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 35

```

aacaagaacc agtctgcgct gtcgagttct atcgagcgtc tgtcttctgg cttgcgtatt 60
aacagcgcga aggatgacgc cgcaggtcag gcgattgcta accgttttac ttctaactatt 120
aaaggcctga ctcaggctgc acgtaacgcc aacgacggta tttctgttgc gcagaccacc 180
gaaggcgcgc tgtccgaaat caacaacaac ttacagcgtg tgcgtgaact gaccgttcag 240
gcaaccaccg gtaccaactc ccagtctgac ctggactcta tccaggacga aattaaatcc 300
cgtctggacg aaattgaccg cgtatccggt cagaccaggt tcaacggcgt gaacgtactg 360
gcaaaagacg gttccatgaa aattcaggtt ggcgcgaacg atggccagac catcactatc 420
gacctgaaga agattgactc ttctacgctg aaactgactg gttttaacgt gaatggcaaa 480
gcagcgggtg ataattgctaa agcgacggat gcaaactctga ctaccgccgg ttttacaaa 540
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tccactggta atttgactaa gaacggctct gatactttaa ctcaggcaac attgaatgat 960
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gcaatgacta atgagttgac aggtaaggcc tataccgtag taaatgggtg agaactctac 1140
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gacgcaatca gccagatcga caaattccgt tcacccctgg gtgctatcca gaaccgtctg 1440
gattccgcag tcaccaacct gaacaacacc actaccaatc tgtctgaagc gcagtcccg 1500
attcaggacg ccgactatgc gaccgaagtg tccaatatgt cgaaagcgca gatcatccag 1560

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caggcaggca actccgtgct ggcaaaa

1587

&lt;210&gt; 36

&lt;211&gt; 1245

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 36

aacaaaaacc agtctgcgct gtcgacttct atcgagcgcc tctcttctgg tctgcgcatt 60  
aacagcgcta aagatgacgc tgcggggccag gcgattgcta accgcttcac ttctaacatc 120  
aaaggtctga ctcaggcgcg acgtaacgcc aacgacggta tctctctggc gcagaccact 180  
gaaggcgcac tgtctgaaat caacaacaac ttgcagcggtg ttcgtgaact gaccgttcag 240  
gccactaccg gtactaactc tgattctgac ctgtcttcaa tccaggacga aatcaaatcc 300  
cgtctcgatg aaattgaccg cgtatccggt cagactcagt tcaacggcgt gaacgtactg 360  
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&lt;210&gt; 37

&lt;211&gt; 1185

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 37

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&lt;210&gt; 38

&lt;211&gt; 1383

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 38

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&lt;210&gt; 39

&lt;211&gt; 1680

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 39

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&lt;210&gt; 40

&lt;211&gt; 1146

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 40

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<211> 1506

<212> DNA

<213> Escherichia coli

<400> 41

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<210> 42

<211> 950

<212> DNA

<213> Escherichia coli

<400> 42

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gcggtattca gcgcggcgaa actgacggct gctgatggta cagcaattgc tgctgcggat 540  
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&lt;210&gt; 43

&lt;211&gt; 1707

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 43

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1707

&lt;210&gt; 44

&lt;211&gt; 1720

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 44

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&lt;210&gt; 45

&lt;211&gt; 14516

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 45

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&lt;210&gt; 46

&lt;211&gt; 1380

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 46

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&lt;210&gt; 47

&lt;211&gt; 1497

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 47

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&lt;210&gt; 48

&lt;211&gt; 1695

&lt;212&gt; DNA

<213> *Escherichia coli*

&lt;400&gt; 48

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- 37 -

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 <213> Escherichia coli

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&lt;210&gt; 51

&lt;211&gt; 1344

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 51

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- 39 -

&lt;210&gt; 52

&lt;211&gt; 2599

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 52

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<211> 1245

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<213> Escherichia coli

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- 47 -

&lt;210&gt; 57

&lt;211&gt; 1758

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 57

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1758

&lt;210&gt; 58

&lt;211&gt; 1758

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 58

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&lt;210&gt; 59

&lt;211&gt; 1758

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 59

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1758

&lt;210&gt; 60

&lt;211&gt; 1758

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 60

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<210> 61

<211> 1758

<212> DNA

<213> Escherichia coli

<400> 61

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<210> 62

<211> 1758

<212> DNA

<213> Escherichia coli

<400> 62

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1758

&lt;210&gt; 63

&lt;211&gt; 1758

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 63

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<210> 64

<211> 1758

<212> DNA

<213> Escherichia coli

<400> 64

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1758

&lt;210&gt; 65

&lt;211&gt; 1758

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 65

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1758

&lt;210&gt; 66

&lt;211&gt; 1788

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 66

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&lt;210&gt; 67

&lt;211&gt; 1398

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 67

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&lt;210&gt; 68

&lt;211&gt; 1479

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 68

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1479

1479